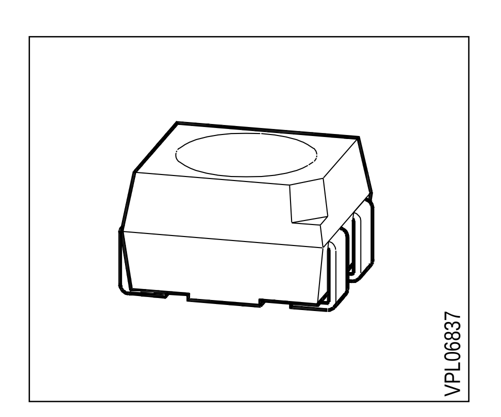
SIEMENS

Hyper Multi TOPLED®
Hyper-Bright LED

LSY T676



Besondere Merkmale

- Gehäusebauform: P-LCC-4
- Gehäusefarbe: weiß
- als optischer Indikator einsetzbar
- zur Hinterleuchtung, Lichtleiter- und Linseneinkopplung
- beide Leuchtdiodenchips getrennt ansteuerbar
- hohe Signalwirkung durch Farbwechsel der LED möglich
- bei geeigneter Ansteuerung, Farbwechsel von grün über gelb und orange bis super-rot möglich
- für alle SMT-Bestück- und Löttechniken geeignet
- gegurtet (8-mm-Filmgurt)
- Störimpulsfest nach DIN 40839

Features

- P-LCC-4 package
- color of package: white
- for use as optical indicator
- for backlighting, optical coupling into light pipes and lenses
- both chips can be controlled separately
- high signal efficiency possible by color change of the LED
- with appropriate controlling it is possible to change color from green to yellow and orange to super-red
- suitable for all SMT assembly and soldering methods
- available taped on reel (8 mm tape)
- load dump resistant acc. to DIN 40839

Typ Type	Emissions-farbe Color of Emission	Farbe der Lichtaus-trittsfläche Color of the Light Emitting Area	Lichtstärke Luminous Intensity I_F = 20 mA I_V(mcd)		Bestellnummer Ordering Code
			super-red	**yellow**	
LSY T676	super-red / yellow	colorless clear	≥ 40	≥ 40	Q62703-Q3428
LSY T676-P+P			40 ... 80	40 ... 80	
LSY T676-P+Q			40 ... 80	63 ... 125	
LSY T676-P+R			40 ... 80	100 ... 200	
LSY T676-Q+Q			63 ... 125	63 ... 125	
LSY T676-Q+R			63 ... 125	100 ... 200	

Grenzwerte
Maximum Ratings

Bezeichnung **Parameter**	**Symbol** **Symbol**	**Wert Value**		**Einheit** **Unit**
		LS	**LY**	
Betriebstemperatur Operating temperature range	T_{op}	– 55 ... + 100		˚C
Lagertemperatur Storage temperature range	T_{stg}	– 55 ... + 100		˚C
Sperrschichttemperatur Junction temperature	T_j	+ 100		˚C
Durchlaßstrom Forward current	I_F	30	20	mA
Stoßstrom Surge current $t \leq 10$ µs, $D = 0.005$	I_{FM}	to be defined		A
Sperrspannung Reverse voltage	V_R	3		V
Verlustleistung Power dissipation	P_{tot}	80	55	mW
Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air Montage auf PC-Board*) (Padgröße ≥ 16 mm²) mounted on PC board*) (pad size ≥ 16 mm²)	$R_{th\,JA}$ 1) $R_{th\,JA}$ 2)	500 600		K/W K/W

*) PC-board: FR4

1) nur ein Chip betrieben
2) beide Chips betrieben

1) one system only
2) both systems on simultaneously

Notes

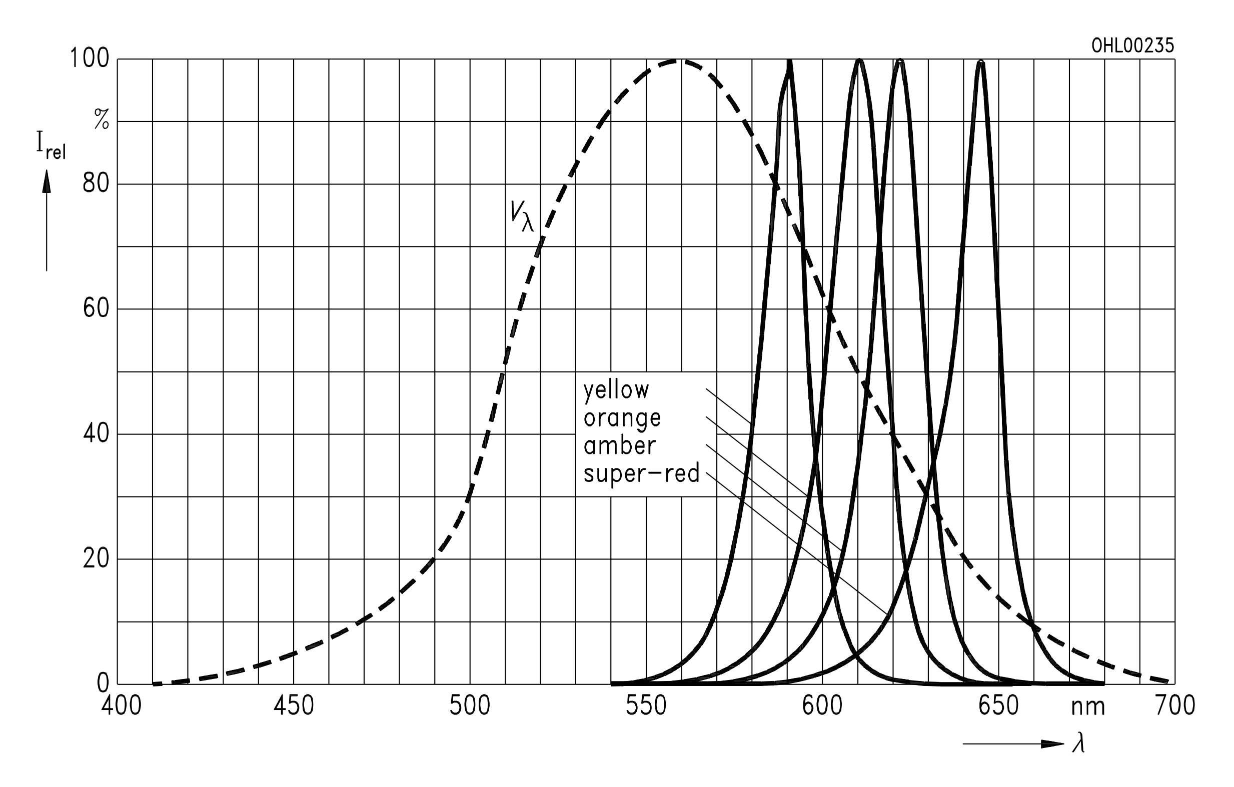
Die angegebenen Grenzdaten gelten für einen Chip.

The stated maximum ratings refer to one chip.

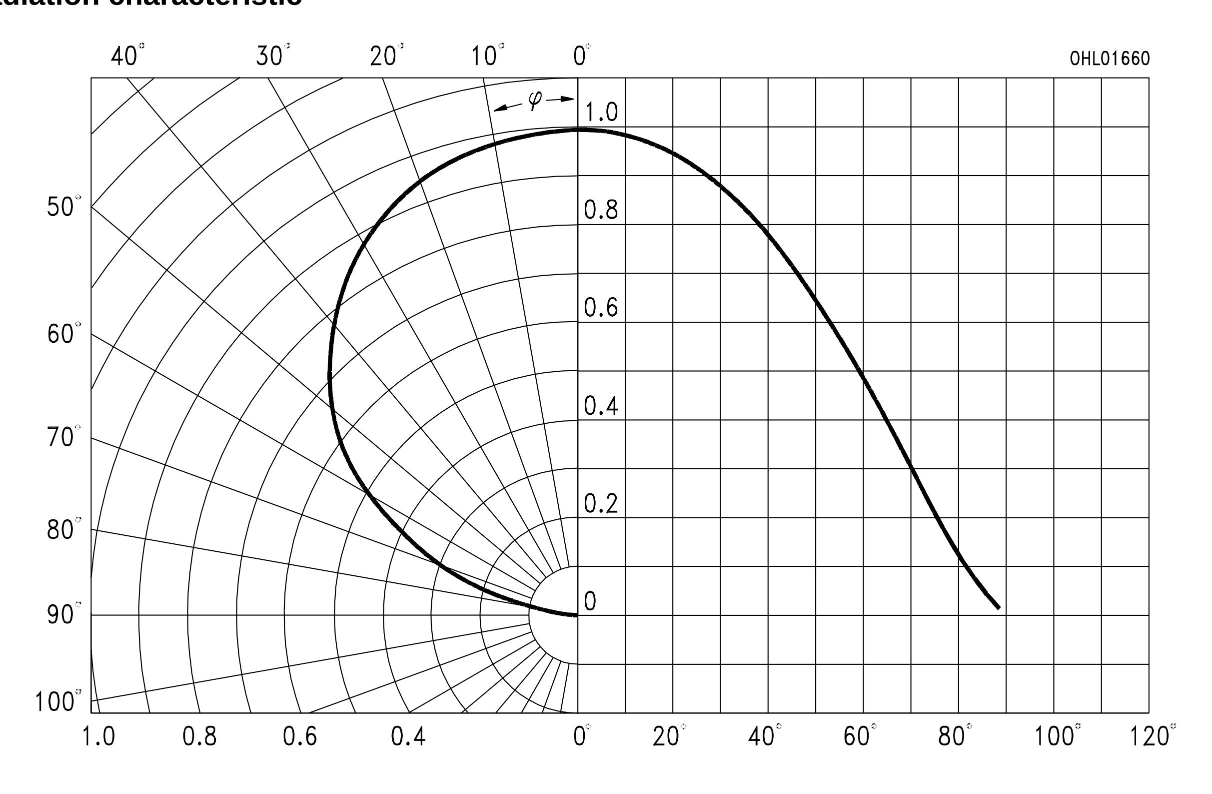
Kennwerte (T_A = 25 ˚C)
Characteristics

Bezeichnung Parameter		Symbol Symbol	Wert Value		Ein- heit Unit
			LS	LY	
Wellenlänge des emittierten Lichtes Wavelength at peak emission I_F = 10 mA	(typ.) (typ.)	λ_{peak}	645	591	nm
Dominantwellenlänge Dominant wavelength I_F = 10 mA	(typ.) (typ.)	λ_{dom}	630	587	nm
Spektrale Bandbreite bei 50 % $I_{rel\ max}$ Spectral bandwidth at 50 % $I_{rel\ max}$ I_F = 10 mA	(typ.) (typ.)	$\Delta\lambda$	16	15	nm
Abstrahlwinkel bei 50 % I_V (Vollwinkel) Viewing angle at 50 % I_V		2φ	120	120	Grad deg.
Durchlaßspannung Forward voltage I_F = 20 mA	(typ.) (max.)	V_F V_F	2.0 2.6	2.0 2.6	V V
Sperrstrom Reverse current V_R = 3 V	(typ.) (max.)	I_R I_R	0.01 10	0.01 10	µA µA
Temperaturkoeffizient von λ_{dom} (I_F = 20 mA) Temperature coefficient of λ_{dom} (I_F = 20 mA)		TC_λ	0.014	0.096	nm/K
Temperaturkoeffizient von λ_{peak}, I_F = 20 mA Temperature coefficient of λ_{peak}, I_F = 20 mA	 (typ.) (typ.)	TC_λ	0.14	0.13	nm/K
Temperaturkoeffizient von V_F, I_F = 20 mA Temperature coefficient of V_F, I_F = 20 mA	(typ.) (typ.)	TC_V	– 1.95	– 2.51	mV/K

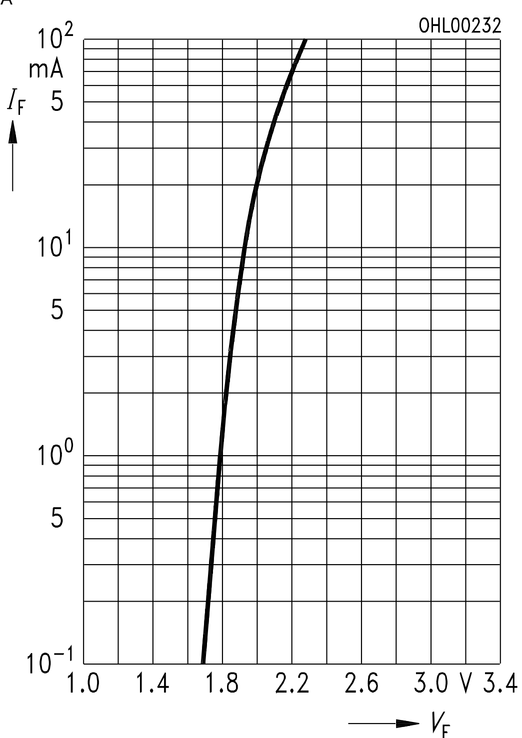
Relative spektrale Emission $I_{rel} = f(\lambda)$, T_A = 25 ˚C, I_F = 10 mA
Relative spectral emission
V (λ) = spektrale Augenempfindlichkeit
Standard eye response curve



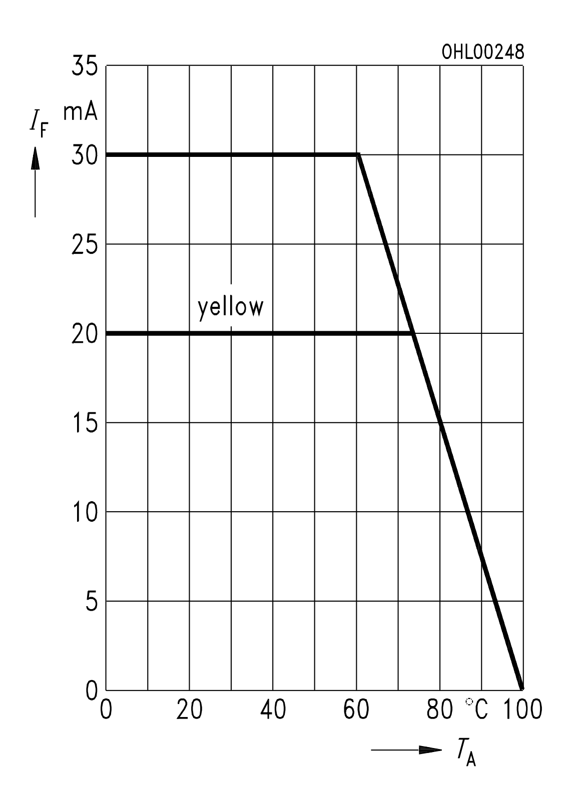
Abstrahlcharakteristik $I_{rel} = f(\varphi)$
Radiation characteristic



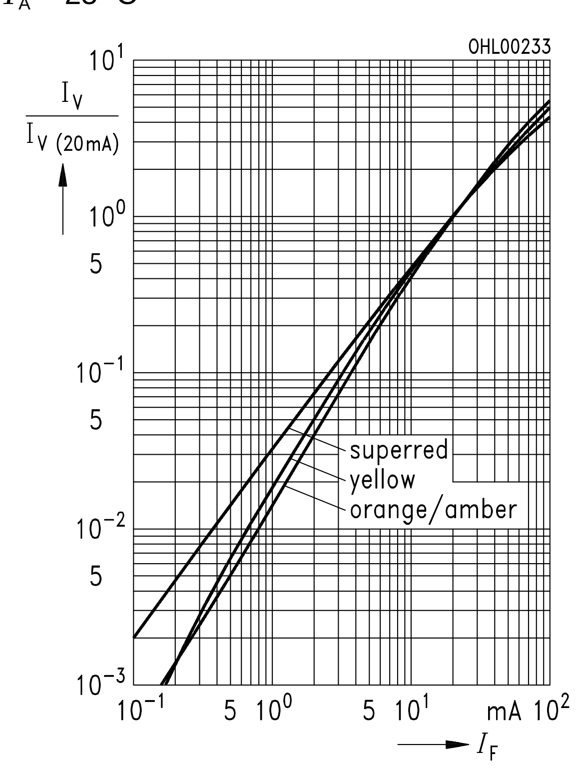
Durchlaßstrom $I_F = f(V_F)$
Forward current
T_A = 25 ˚C



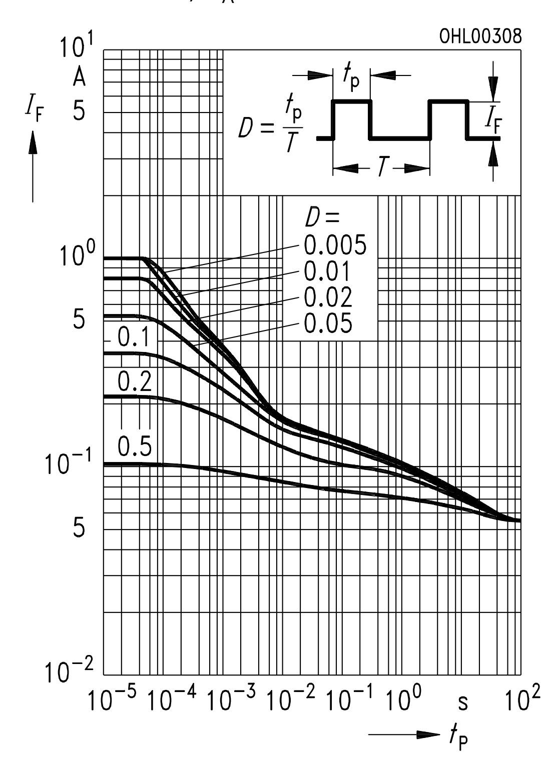
Maximal zulässiger Durchlaßstrom $I_F = f(T_A)$
Max. permissible forward current



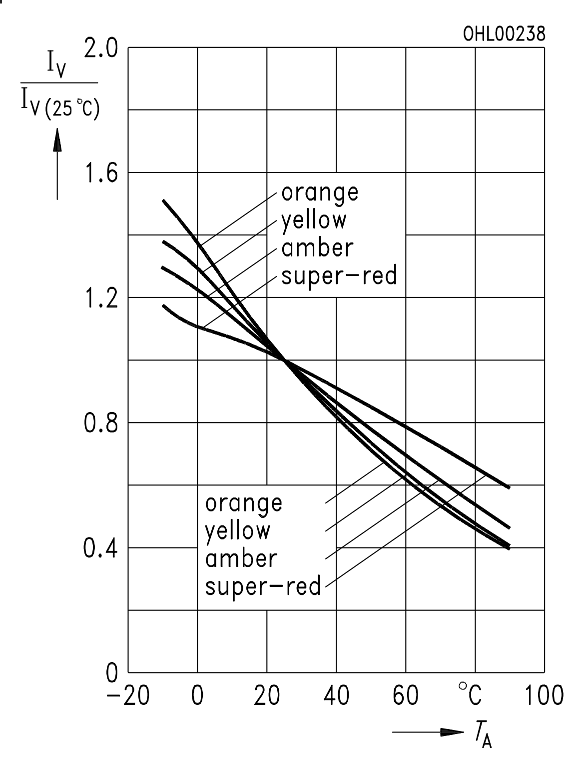
Relative Lichtstärke $I_V / I_{V(20\ mA)} = f(I_F)$
Relative luminous intensity
T_A = 25 ˚C



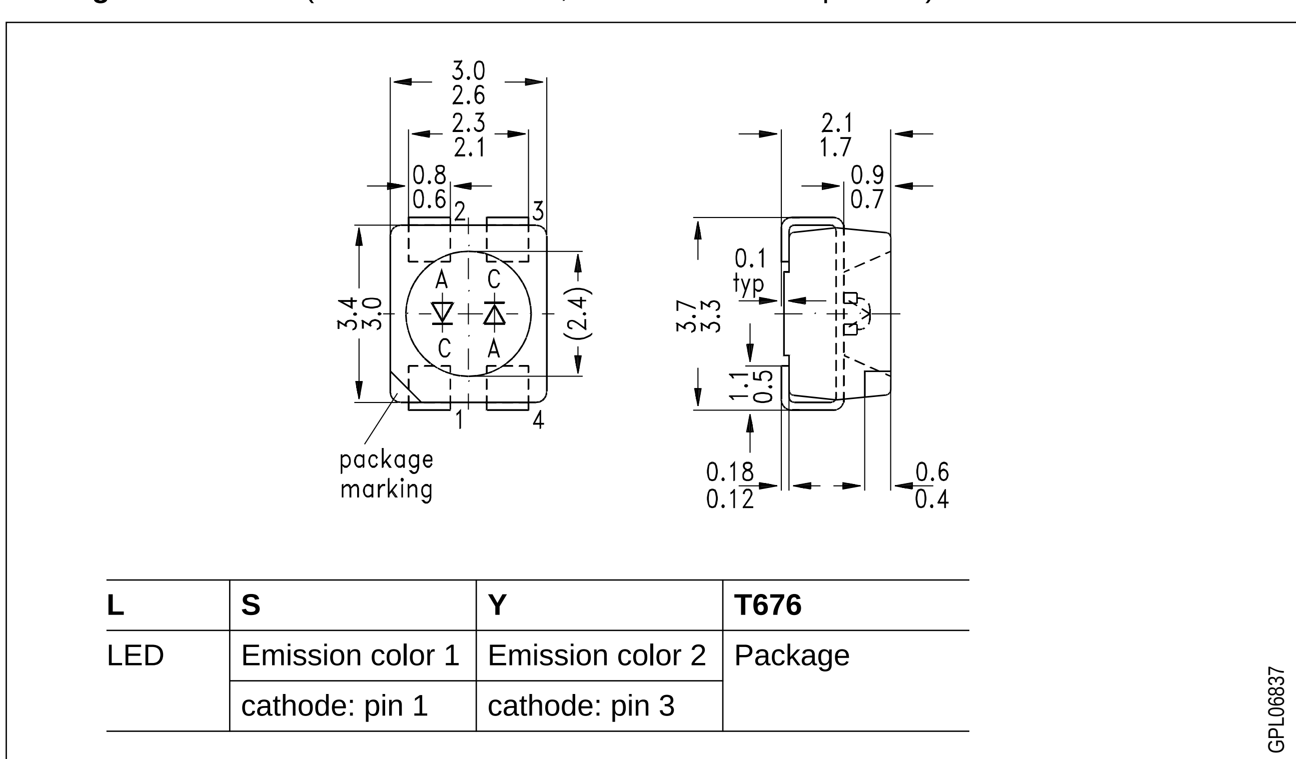
Zulässige Impulsbelastbarkeit $I_f = f(t_p)$
Permissible pulse handling capability
D = Parameter; T_A = 25 °C



Relative Lichtstärke $I_V / I_{V(25\,°C)} = f\,(T_A)$
Relative luminous intensity
I_F = 10 mA



Maßzeichnung (Maße in mm, wenn nicht anders angegeben)
Package Outlines (Dimensions in mm, unless otherwise specified)



L	S	Y	T676
LED	Emission color 1	Emission color 2	Package
	cathode: pin 1	cathode: pin 3	